

Abstract

There are provided;

(i) a solid catalyst component obtained by contacting a
5 trivalent titanium atom-containing solid catalyst component
precursor (C) with a halogeno compound (A) of the 13 (IIIa) or 14 (IV
a) group of elements in the periodic table of the elements and
an electron donor (B), or a solid catalyst component obtained
by contacting an intermediate product with a titanium-halogen
10 bond-carrying compound (D), the intermediate product being
obtained by contacting the solid catalyst component
precursor (C) with a halogeno compound (A) of the 14 (IVa) group
of elements in the periodic table of the elements and the
electron donor (B), or a solid catalyst component comprising
15 a magnesium atom, a titanium atom, a halogen atom and an electron
donor and having a relative surface area of not more than 30
m²/g, the catalyst component being superior in a particle form,

(ii) a catalyst comprising the solid catalyst component
and an organoaluminum compound, the catalyst being high in
20 polymerization activity, so that there is no need to remove
a catalyst residue from a polymer obtained after the
polymerization, and

(iii) a process for producing an olefin polymer using
the catalyst, the polymer produced being superior in powder
25 properties and low in a content of lower molecular weight
components.